

**ABSTRACT OF THE DISCLOSURE**

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2       Included herein is a system and method for controlling a velocity vector  
3 of an overhead crane. A motor is attached to the crane and is positioned to  
4 move the overhead crane and has an output vector including a rotational  
5 direction and a rotational speed. A variable frequency drive is positioned to  
6 transfer voltage and current at a frequency to the motor. A processing unit  
7 converts the output vector to an amount of voltage and current at a given  
8 frequency and can instruct the variable frequency drive to send a frequency to  
9 the motor at a frequency substantially equal to the frequency at which the  
10 motor is presently rotating. This creates a speed match for the motor reducing  
11 spikes during operation of the motor and substantially eliminates open circuit  
12 decay. A hydraulic brake operates in connection with the processing unit and  
13 the variable frequency drive to slow the crane without driving the motor into  
14 the brake.